

What is claimed is:

1. A microarray substrate comprising a patterned photoresist film having one or more spot regions therein, the photoresist film being detachable from the substrate.

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2. The microarray substrate of claim 1, wherein compounds having functional groups capable of covalently binding to probes are attached in the spot regions.

10 3. The microarray substrate of claim 2, wherein the probes are proteins, nucleotides, or polysaccharides.

15 4. The microarray substrate of claim 2, wherein the compounds having the functional groups are silane compounds with aldehyde, epoxy, or amine end groups.

5. A microarray comprising the probes immobilized in the spot regions of the microarray substrate of any one of claims 1 to 4.

20 6. A method of detecting a target material, comprising:

(a) preparing a substrate having a patterned photoresist film, the patterned photoresist film being detachable from the substrate and having one or more spot regions therein;

(b) immobilizing probes in the spot regions to prepare a microarray;

25 (c) contacting the probes and a sample containing the target material to react the probes and the target material;

(d) detaching the photoresist film from the microarray to remove the target material nonspecifically bound to the photoresist film; and

(e) detecting the reaction between the target material and the probes.

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7. The method of claim 6, wherein the probes are proteins, nucleotides, or polysaccharides.